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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER	
BARQADLE, YASIN M	
ART UNIT	**PAPER NUMBER**
2153	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/026,061	COHEN ET AL.	
	Examiner	Art Unit	
	Yasin M. Barqadle	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/07/2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Amendment

The amendment filed on December 07, 2006 has been fully considered but are moot in view of the new grounds of rejection.

- Claim 1-10 have been previously cancelled
- Claims 11-29 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 11-16,18-26 and 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thiesson et al US. Patent No. (6807537) in view of Baker U.S. Patent No. (6076083).

As per claim 11, Thiesson et al teach a method for adapting a Bayesian network (abstract), comprising the steps of:

generating a set of parameters of the Bayesian network in response to a set of past observation data such that the

Bayesian network models an environment (The MBN generator 502 of the exemplary embodiment contains a scoring mechanism 602 and a network adjuster 606. The scoring mechanism 602 receives the expert knowledge 506, the empirical data 504, the test network 608 and a list of nodes 610 as input. After receiving this information, the scoring mechanism 608 generates a score 604 that ranks the nodes of test network 608 as indicated by the list of nodes 610 for goodness ... In the exemplary embodiment, a Bayesian network (i.e., the initial network or the test network 608) is stored in memory as a tree data structure where each node in the tree data structure corresponds to a node in the Bayesian network. … The network adjuster 606 receives as input the score 604 and the initial network and generates a new test network 608 in response thereto, which is then passed back to the scoring mechanism 602 with a list of nodes 610 which need to be rescored. After iterating many times between the scoring mechanism 602 and the network adjuster 606, the network adjuster eventually generates an improved MBN 508 (hereinafter referred to as a Bayesian network col. 21, lines 27-65 and col. 22, lines 56 to col. 23, line 30);

obtaining a set of present observation data from the environment "The network adjuster 606 receives as input the score 604 and the initial network and generates a new test

network 608 in response thereto, which is then passed back to the scoring mechanism 602 with a list of nodes 610 which need to be rescored." col. 21, lines 27-65 and col. 22, lines 56 col. 29, lines 36-55);

updating the parameters in response the present observation data (the Bayesian network is scored for how well all decision graphs reflect the data, and the Bayesian network is then updated to improve its score col. 29, lines 36-55 and col. 32, lines 43-67. see fig. 26A and col. 21, lines 27-65).

Although Thiesson shows substantial features of the claimed invention, he does not explicitly show where the learning rate is selected to respond to changes in the environment. Nonetheless, this feature is well known in the art and would have been an obvious modification of the system disclosed by Thiesson, as evidenced by Baker USPN. (6076083).
In analogous art, Baker whose invention is about Diagnostic system utilizing Bayesian network model having link weights updated experimentally disclose Bayesian network expert systems which learn from experience and adjust link weights to more accurately reflect the body of available knowledge. [Abstract and col. 7, lines 38-65]. Giving the teaching of Baker, a person of ordinary skill in the art would have readily recognized the

desirability and the advantage of modifying Thiesson by employing the system of Baker so that the Bayesian network expert systems learns from experience and adjust link weights to more accurately reflect the body of available knowledge and to automatically update the probability matrices of the network based on experiential knowledge.

As per claim 12, Thiesson et al teaches the method of claim 11, wherein updating comprises updating the parameters using a different learning rate for each parameter of the Bayesian network (col. 8, lines 5-36.)

As per claim 13, Thiesson et al teaches the method of claim 11, further comprising determining the learning rate by determining an initial value for the learning rate (col. 21, lines 27-65 and col. 29, line 36 - col. 30 line 21) and determining an estimate of the parameters in response to the present observation data (col. 21, lines 27-65 and col. 29, line 36 - col. 30 line 21) and increasing the learning rate if an error between the estimate and a mean value of the parameters is relatively large (col. 15, line 55 - col. 16, line 67 and col. 20, line 66 - col. 21, line 55.)

As per claim 14, Thiesson et al teaches the method of claim 11, further comprising determining the learning rate by determining an initial value for the learning rate (col. 29, lines 36-55) and determining an estimate of the parameters in response to the present observation data (col. 21, lines 27-65, col. 29, line 29 - col. 30 line 21 and col. 32, lines 48-67) and decreasing the learning rate when convergence is reached between the estimate and a mean value of the parameters (col. 15, line 55 - col. 16, line 67 and col. 20, line 66 - col. 21 line 55.)

As per claim 15, Thiesson et al teaches the method of claim 11, wherein a subset of values in the present observation data is unavailable when updating (col. 9, lines 8-23.)

As per claim 16, Thiesson et al teaches the method of claim 11, wherein the environment is an online environment (refer to Fig. 28, col. 21, lines 27-65 and col. 29, line 36 - col. 30, line 29.)

As per claim 18, Thiesson et al teaches the method of claim 16, wherein the online environment is an e-commerce System (col. 31, lines 7-47.)

As per claim 19, Thiesson et al teaches the method of claim 16, wherein the online environment is a database system (col. 4, lines 8-23).

As per claim 20, Thiesson et al teaches the method of claim 11, wherein updating comprises determining an initial set of the parameters and then updating the parameters in response to the present observation data using the learning rate (col. 12, lines 14-61 and col. 24, lines 36-67).

Claims 21-26 and 28-29 contain similar limitations as claims 11-16, and 18-20 above; therefore, they are rejected for similar reasons. Thiesson et al as modified teaches wherein the environment is an online environment (refer to Fig. 28, col. 21, lines 27-65 and col. 29, line 36 - col. 30, line 29.)

Claim 17 and 27, are rejected under 35 U.S.C. 103(a) as being unpatentable over Thiesson et al US. Patent No. (6807537) in view of Baker and further in view of Horvitz U.S. Patent No. (6182133).

As per claim 17 and 27 Thiesson et al teaches the invention as discussed above. Thiesson et al does not explicitly teach wherein the online environment is an email system.

Horvitz teaches initiating multiple tasks to pre-fetch variables by including sending and receiving e-mail messages (col. 36, lines 14-28)

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to combine the teaching of Horvitz into the system of Thiesson et al in order to increase expandability. Horvitz provides fort a collection of data sets from multiple sources to continually compute variables. Allowing the system to use disparate sources would increase system operability and greatly facilitate system expansion.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yasin Barqadle whose telephone number is 571-272-3947. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on 571-272-3949. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Information regarding the status of an application may be obtained form the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or public PAIR system. Status information for unpublished applications is available through private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YB

Art Unit 2153

ABDULLAHI SALAD
PRIMARY EXAMINER